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JERRY.SHORMA@HP.COM  
ipa.mail@hp.com  
laura.m.clark@hp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ROLF DESSAUER

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Appeal 2009-013696  
Application 10/656,503  
Technology Center 1700

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Before BRADLEY R. GARRIS, LINDA M. GAUDETTE, and  
KAREN M. HASTINGS, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision<sup>2</sup> finally rejecting claims 1-25, 33-36, and 38-41.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellant's invention is directed to:

compositions, articles, and systems using a color forming composition, comprising a dye precursor composition including a phthalocyanine precursor and a binder, and an infrared absorber admixed with or in thermal contact with the dye precursor composition; where the color forming composition is configured for development in less than about 1 msec when exposed to about 30 mW to about 50 mW of infrared radiation at a spot size from about 1  $\mu\text{m}$  to about 200  $\mu\text{m}$ .

(App. Br. 11.)

The Examiner maintains<sup>4</sup>, and Appellant requests review of (App. Br. 9-10), the following grounds of rejection:

1. Claims 1, 4-10, 12-15, and 39-41 under 35 U.S.C. § 103(a) as unpatentable over RD 39219<sup>5</sup> and JP 357<sup>6</sup>, in view of Kawauchi<sup>7</sup> and/or Satake<sup>8</sup> (Ans. 4-8);
2. Claims 1, 4-10, 12-15, 17, 20-22, 24, 25, and 39-41 under 35 U.S.C. § 103(a) as unpatentable over RD 39219 and JP 357, in view of Fleming 536<sup>9</sup> and Anderson<sup>10</sup> (Ans. 8-10);

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<sup>2</sup> Final Office Action mailed Jul. 21, 2008 ("Final").

<sup>3</sup> Appeal Brief filed Dec. 9, 2008 ("App. Br.").

<sup>4</sup> Examiner's Answer mailed Apr. 14, 2009.

<sup>5</sup> *Infrared Printout Systems Based on Phthalocyanine Precursors*, in 392019 Research Disclosure Journal 1-2 (December 1996) (hereafter RD 39219).

<sup>6</sup> Sawanori et al., JP 58008357, pub. Feb. 15, 1983.

<sup>7</sup> U.S. 2001/0039895 A1, pub. Nov. 15, 2001.

<sup>8</sup> Satake et al., U.S. 5,470,816, issued Nov. 28, 1995.

3. Claims 1, 4-15, 17, 20-25, and 39-41 under 35 U.S.C. § 103(a) as unpatentable over RD 39219 and JP 357, in view of Fleming 536 and Anderson, in view of Boggs<sup>11</sup> (Ans. 10);

4. Claims 1-10, 12-22, 24, 25, and 39-41 under 35 U.S.C. § 103(a) as unpatentable over RD 39219 and JP 357, combined with Fleming 536 and Anderson, in view of either Perkins<sup>12</sup> or Fleming 704<sup>13</sup> (Ans. 11); and

5. Claims 1-10, 12-22, 24, 25, 33-36, and 38-41 under 35 U.S.C. § 103(a) as unpatentable over RD 39219 and JP 357, combined with Fleming 536 and Anderson and either Perkins or Fleming 704, further in view of Gravesteijn<sup>14</sup> and Melles<sup>15</sup> (Ans. 12).

Independent claim 1, the broadest appealed claim, is reproduced below from the Claims Appendix to the Appeal Brief:

1. A color forming composition, comprising:

a) a dye precursor composition including a phthalocyanine precursor and a binder; and

b) an infrared absorber admixed with or in thermal contact with the dye precursor composition,

said color forming composition being configured for development in less than about 1 msec when exposed to about 30 mW to about 50 mW of infrared radiation at a spot size from about 1  $\mu$ m to about 200  $\mu$ m.

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<sup>9</sup> Fleming et al., U.S. 5,362,536, issued Nov. 08, 1994.

<sup>10</sup> Anderson et al., WO 03/032299 A2, pub. Apr. 17, 2003.

<sup>11</sup> Boggs et al., U.S. 5,236,884, issued Aug. 17, 1993.

<sup>12</sup> Perkins et al., U.S. 2,957,004, issued Oct. 18, 1960.

<sup>13</sup> Fleming et al., U.S. 4,284,704, issued Aug. 18, 1981.

<sup>14</sup> Gravesteijn et al., U.S. 4,508,811, issued Apr. 02, 1985.

<sup>15</sup> *Diode Laser Assembly Selection Matrix*, Melles Griot 49-3 – 49-5 (1995/96) (hereafter Melles).

The remaining independent claims (claims 16, 17, and 33) include all of the limitations recited in claim 1.

Appellant relies on the same arguments in traversing all five grounds of rejection. (*See* App. Br. 23-26.) These arguments raise the following issue: Are the facts and reasons relied on by the Examiner sufficient to establish that the combined teachings of the references would result in a color forming composition which is inherently “configured for development in less than about 1 msec when exposed to about 30 mW to about 50 mW of infrared radiation at a spot size from about 1  $\mu\text{m}$  to about 200  $\mu\text{m}$ ” as recited in independent claims 1, 16, 17, and 33? (*See* App. Br. 17.)

We answer this question in the affirmative for the reasons that follow.

The appealed claims require a composition “configured for development in less than about 1 msec when exposed to about 30 mW to about 50 mW of infrared radiation at a spot size from about 1  $\mu\text{m}$  to about 200  $\mu\text{m}$ ” (claims 1, 16, 17, and 33). “[T]his recitation goes to the sensitivity of the composition.” (App. Br. 17; *see also*, Ans. 6, 1. 5.)

According to the Specification (“Spec.” filed Sep. 5, 2003), “‘development’ . . . refers to the interaction or reaction which reduces substantially all of the phthalocyanine precursor to produce a visible change in color through reduction to the corresponding phthalocyanine dye.” (Spec. 4:3-6.) “[O]ptimization’ and ‘optimized’ refer to a process of selection of components of the color forming composition which results in a rapidly developable composition under a fixed period of exposure to infrared radiation” (Spec. 5:20-23), e.g., for a period of 1 msec (Spec. 5:26) using typical commercial IR lasers which operate at wavelengths of 780 and 830 nm (*see* Spec. 13:17-20). The Specification states that “[t]he color forming

compositions . . . can be optimized by adjusting the concentrations and type of infrared absorber, phthalocyanine precursor, and binder.” (Spec. 17:32-18:2.)

The Specification states that the phthalocyanine precursor can be present in an amount of from 1 to about 40% (Spec. 11:18-19) and identifies suitable phthalocyanine precursors as including LUSANE-type precursors produced by the method disclosed in US 2,772,284, issued Nov. 27, 1956 to Barnhart (Spec. 10:1-3 (incorporating this patent by reference)). In Example 5, Barnhart discloses heating a complex leuco compound for copper phthalocyanine at 200 °C for 15 minutes to form a blue residue. According to the Specification, “[s]uitable binders can include, but are not limited to, polymeric materials such as polyacrylate from monomers and oligomers, polyvinyl alcohols, polyvinyl pyrrolidines, polyethylenes, polyphenols or polyphenolic esters, polyurethanes, acrylic polymers, and mixtures thereof.” (Spec. 11:26-29.) The Specification identifies numerous suitable inorganic and organic compounds which are suitable for use as the infrared absorber (see Spec. 14:8-15:5), and indicates that “[t]he infrared absorber can be present in the color forming composition in an amount of from about 0.001 wt% to about 10 wt%, and typically, from about 0.5 wt% to about 1 wt%, although other weight ranges may be desirable depending on the activity of the particular absorber” (Spec. 13:1-4).

Appellant does not dispute the Examiner’s findings that: (1) the combination of RD 39219 and JP 357 teaches forming photothermographic recording materials using phthalocyanine precursors which form a phthalocyanine which colors at temperatures of less than 150 °C, an IR absorber, and a binder of the type used by Appellant, e.g., ethyl cellulose

(Ans. 4); (2) the secondary references teach the use of the same IR absorbers used by Appellant in amounts which fall within the ranges disclosed in Appellant's Specification (*see, e.g.*, Ans. 4-6, 8-9); and (3) the secondary references teach the use of conventional IR lasers as a recording light source which operate at a power and spot size which falls within Appellant's claimed ranges (Ans. 5, 8). (*See generally* App. Br. 11-26; Rep. Br. 4-5.)

Appellant has not attempted to refute the Examiner's proposed motivation for combining the references. (*See generally*, App. Br. 14-26; Rep. Br. 4-8.) Rather, Appellant contends the Examiner's findings are not sufficient to establish that the proposed combination would result in a composition which inherently possesses the claimed sensitivity. (*Id.*) Appellant states: "the present references teaches [sic] compositional elements that may provide a sensitive color forming composition, such a possibility is not enough to establish inherency." (App. Br. 22.)

Appellant's arguments have been fully addressed by the Examiner in the Answer and are unpersuasive for the reasons stated therein. (*See* Ans. 6-17.)

"The discovery of a new property or use of a previously known composition, even when that property and use are unobvious from the prior art, can not impart patentability to claims to the known composition." *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990). *Cf. In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (discussing the law on inherent anticipation) ("Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not

recognize the inherent characteristics or functioning of the prior art.”)  
(citations omitted).<sup>16</sup>

The Examiner identified teachings of phthalocyanine precursors, IR absorbers, and binders which would reasonably appear to have the same properties as those used by Appellant, and provided a detailed explanation as to why it would have been obvious to have selected and combined these components in the same amounts used by Appellant. (*See* Ans. 3-17.) Accordingly, the Examiner had a reasonable basis for concluding that the resultant color forming composition would inherently be “configured for development in less than about 1 msec when exposed to about 30 mW to about 50 mW of infrared radiation at a spot size from about 1  $\mu\text{m}$  to about 200  $\mu\text{m}$ ” as recited in independent claims 1, 16, 17, and 33. (*Cf.* App. Br. 19 (noting that sensitivity of the composition depends on the nature and properties, as well as the concentrations of the IR absorber, phthalocyanine precursor, and binder).)

[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

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<sup>16</sup> See also *Ex parte Obiaya*, 227 USPQ 58, 60 (BPAI 1985), *aff'd mem.*, 795 F.2d 1017 (Fed. Cir. 1986) (holding that the recognition of another advantage flowing naturally from following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise be obvious).

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*In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997) (quoting *In re Swinehart*, 439 F.2d 210, 213 (C.C.P.A. 1971)). See also, *In re Crish*, 393 F.3d 1253, 1259 (Fed. Cir. 2004) (quoting *Spada*, 911 F.2d at 708 n.3) (“[W]hen the prior art evidence reasonably allows the PTO to conclude that a claimed feature is present in the prior art, the evidence ‘compels such a conclusion if the applicant produces no evidence or argument to rebut it.’”).

Appellant’s arguments fail to establish that the totality of the facts and reasons relied on by the Examiner are insufficient to provide a *reasonable basis* for the Examiner’s determination that the combined teachings of the references would result in a composition inherently possessing the claimed sensitivity. Appellant has not provided evidence which demonstrates that the Examiner’s proposed combination would not result in a composition which inherently possesses the claimed sensitivity.

Accordingly, we sustain all five grounds of rejection. The Examiner’s decision to reject claims 1-25, 33-36, and 38-41 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED

Ssl

HEWLETT-PACKARD COMPANY  
INTELLECTUAL PROPERTY ADMINISTRATION  
3404 E. HARMONY ROAD  
MAIL STOP 35  
FORT COLLINS, CO 80528